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Fei Qi* (fei.qi@umanitoba.ca), Department of Mathematics, University of Manitoba, 420
Machray Hall, 186 Dysart Road, Winnipeg, Manitoba R3T2N2, Canada. *Meromorphic open-string
vertex algebra on the two-dimensional sphere and its modules*. Preliminary report.

Meromorphic open-string vertex algebra (MOSVA hereafter) is a noncommutative generalization introduced by Yi-Zhi Huang in 2012. He also proved that the parallel sections of the tensor algebra bundles over a Riemannian manifold naturally generate a MOSVA, where vertex operators do not satisfy commutativity if the curvature is nonzero. We hope to give a mathematical construction of 2-dimensional nonlinear sigma-model using MOSVAs and modules. In this talk, I will present the example of MOSVA and modules built from the simplest nonflat Riemannian manifold, the 2-dimensional sphere, and discuss some interesting properties. (Received September 17, 2019)